

## ABSTRACT

An object of the invention is to provide a high-quality soldering method, by reducing, to a vacuum, the pressure in a vacuum room (2) in which a  
5 workpiece (10) having solid solder placed thereon consisting solely of tin or including tin and one or more components selected from silver, lead, copper, bismuth, indium and zinc is disposed. A free-radical gas is generated to remove an oxide film on the solder, and, after that, the generation of the free-radical gas is stopped, and the temperature of the solder is raised to a temperature above the  
10 melting point of the solder to melt the solder in the non-oxidizing atmosphere.